Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

JNANA BHARATHI
BANGALORE - 560 056

FOR QUALITY & EXCELLENCE IN HIGHER EDUCATION
Accredited by NAAC

BUB/CTE/2014-15/

Date: 19-03-2015

TEST REPORT ON WET MIX MACADAM MIX

(GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.
{Project*: Improvements and Asphalting to Siddivinayaka and Sir M.V.Layout Road in Ward No. 09 in Vidyaranyapura Sub-Division}

Ref.: Letter No. Testing/BUB/2014-15/ dated 17-03-2015

Sample supplied to lab by: Sri.R,Madhusudhan, Contractor, Bangalore.

Report required for: Assistant Executive Engineer,
Vidyaranyapura Sub-Division.
BBMP, Bangalore.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, IV Revision-2001
53.00	**100.00**	100
45.00	**96.60**	95-100
26.50	---	-
22.40	**72.30**	60-80
11.20	**46.00**	40-60
4.75	**33.20**	25-40
2.36	**22.00**	15-30
0.600	**16.90**	8-22
0.075	**4.20**	0-8

TABLE 1 2 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2007)
1	Flakiness & Elongation Index	01	**24.10 %**	Not more than 30 %
2	Impact Value	----,,----	**25.60 %**	Not more then 24.00 % for BC Not more then 27.00 % for DBM Not more then 30.00 % for BM/WMM

*As Furnished by Client

The Results relate only to the items tested.

19/03/2015

G R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Compus
BANGALORE UNIVERSITY
Bangalore-560 056.

Dr. MANJESH .L
ME(Civil Engg.) Ph.D.. MISTE, MIRC
Associate Professor
Department of Civil Engineering
Bangalore University. Jnanabharathi Campus,
BANGALORE 560 056.
E-mail: maniesnl@yahoo.com

FOR QUALITY EXCELLENCE IN HIGHER EDUCATION
Accredited by NAAC

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2014-15/

Date: 19-03-2015

TEST REPORT ON WET MIX MACADAM MIX
(GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.
{Project*: Improvements and Asphalting to Siddivinayaka and Sir M.V.Layout Roads in Ward No.09 of Vidyaranyapure Sub-Division}

Ref.: Letter No. Testing/BUB/2014-15, dated 17-03-2015

Sample supplied to lab by: Sri.R.Madhusudhan, Contractor, Bangalore.

Report required for: Assistant Executive Engineer, Vidyaranyapure Sub-Division. BBMP, Bangalore.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, IV Revision-2001
53.00	**100.00**	100
45.00	**96.30**	95-100
26.50	**---**	-
22.40	**75.20**	60-80
11.20	**46.00**	40-60
4.75	**38.00**	25-40
2.36	**23.10**	15-30
0.600	**19.60**	8-22
0.075	**3.00**	0-8

*As Furnished by Client

The Results relate only to the items tested

Accepted

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore -

G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Compus
BANGALORE UNIVERSITY
Bangalore-560 056.

19/03/2015

Dr. MANJESH .L
ME (Civil Engg) Ph D MISTE.MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus
BANGALORE- 560 056
e- mail: manjeshl@yahoo.com

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

Date: 19-03-2015

TABLE 12 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2007)
1	Flakiness & Elongation Index	01	**24.60%**	Not more than 30 %
2	Impact Value	----,,----	**23.80%**	Not more then 24.00 % for BC Not more then 27.00 % for DBM Not more then 30.00 % for BM/WMM

*As Furnished by Client

The Results relate only to the items tested.

DEPARTMENT OF CIVIL ENGINEERING * BANGALORE UNIVERSITY

19/03/2015

Dr. MANJESH
ME(Civil Engg.) Ph.D. MISTE, MIEO
Associate Professor
Department of Civil Engineering
Bangalore University, Jnanabharathi Campus,
BANGALORE 560 056.
E-mail: maniesnl@yahoo.com

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2014-15/ **Date: 26-03-2015**

1. Bituminous Concrete.

Sub: Testing of Bitumen Premix Sample.

{Project*: Improvements and Asphalting to Siddivianyaka and Sir MV Layout Roads in Ward No.09 of Vidyaranyapura Sub-Division}

Ref.: Letter No. Testing/BUB/2014-15, dated 24-03-2015

Sample supplied to lab by: Sri.R.Madhusudhan, Contractor, Bangalore.

Report required for: Assistant Executive Engineer, Vidyaranyapura Sub-Division, BBMP, Bangalore.

A. Type of Construction: **Bituminous Concrete.**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **6.02 %.**

2. Gradation Test

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-18 of MORTH Specfications-2001 BC (Grading – 2)
19.0	**100**	100
13.2	**93.00**	79-100
9.5	**81.40**	70-88
4.75	**62.00**	53-71
2.36	**49.00**	42-58
1.18	**38.70**	34-48
0.600	**29.30**	26-38
0.300	**20.00**	18-28
0.150	**17.00**	12-20
0.075	**6.00**	4-10

Note: * As furnished by Client.

The Results relate only to the items tested.

G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Campus
BANGALORE UNIVERSITY
Bangalore-560 056.

Dr. MANJESH .L
ME(Civil Engg.) Ph.D., MISTE, MIRC
Associate Professor
Department of Civil Engineering
Bangalore University, Jnanabharathi Campus,
BANGALORE - 560 056.
E-mail: manjeshl@yahoo.com

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

Date: 26-03-2015

TABLE 12 :

SL No	Test conducted	Sample No	Results	**Requirements** as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2007)
1	Flakiness & Elongation Index	01	**24.300%**	Not more than 30 %
2	Impact Value	----,,----	**25.10 %**	Not more then 24.00 % for BC Not more then 27.00 % for DBM Not more then 30.00 % for BM/WMM
3	Water absorption	----,,----	**0.40%**	Not more than 1.0 %
4	Stripping test. (Coating and stripping of Bitumen aggregate mixtures)	----,,----	**97.40 %**	Minimum retained coating 95.0 **%**

*As Furnished by Client

The Results relate only to the items tested.

DEPARTMENT OF CIVIL ENGINEERING ★ BANGALORE UNIVERSITY

26/03/2015

Dr. MANJESH .L
ME(Civil Engg.) Ph.D. MISTE, MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus,
BANGALORE 560 056.
E-mail: manjesnl@yahoo.com

FOR QUALITY & EXCELLENCE IN HIGHER EDUCATION
★ ★ ★ ★ ★
Accredited by NAAC

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2014-15/ **Date: 26-03-2015**

TEST REPORT ON BITUMINOUS MIXES
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: Testing of Bitumen Premix Sample (Semi Dense Bituminous Concrete-SDBC).
{Project*: Improvements and Asphalting to Siddivinayaka and Sir M.V.Layout Roads in Ward No.09 of Vidyaranyapure Sub-Division}

Ref.: Letter No. Testing/BUB/2014-15, dated 24-03-2015

Sample supplied to lab by: Sri.R.Madhusudhan, Contractor, Bangalore.

Report required for: Assistant Executive Engineer, Vidyaranyapure Sub-Division. BBMP, Bangalore.

TEST RESULTS:

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.03 %**
2. **Gradation Test :**

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-15 of MORTH Specifications-2001 (Grading – 2)
13.2	**100**	100
9.5	**95.10**	90—100
4.75	**44.00**	35—51
2.36	**34.10**	24—39
1.18	**18.00**	15—30
0.3	**13.00**	09—19
0.075	**4.60**	03—08

* As furnished by Client.
The Results relate only to the items tested.

Accepted

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Campus
BANGALORE UNIVERSITY
Bangalore-560 056.

26/03/2015

Dr. MANJESH .L
ME (Civil Engg) Ph D MISTE.MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus
BANGALORE- 560 056
e- mail: manjeshl@yahoo.com

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

Date: 26-03-2015

TABLE 12 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2007)
1	Flakiness & Elongation Index	01	**24.300%**	Not more than 30 %
2	Impact Value	----,,----	**25.10 %**	Not more then 24.00 % for BC Not more then 27.00 % for DBM Not more then 30.00 % for BM/WMM
3	Water absorption	----,,----	**0.40%**	Not more than 1.0 %
4	Stripping test. (Coating and stripping of Bitumen aggregate mixtures)	----,,----	**97.40 %**	Minimum retained coating 95.0 %

*As Furnished by Client

The Results relate only to the items tested.

DEPARTMENT OF CIVIL ENGINEERING * BANGALORE UNIVERSITY

26/03/2015

Dr. MANJESH .L
ME(Civil Engg.) Ph.D. MISTE, MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus,
BANGALORE 560 056.
E-mail manjesnl@yahoo.com